



## SEQUENCE LISTING

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Hu, Qianjin

<120> METHODS FOR IDENTIFYING G-PROTEIN  
COUPLED RECEPTORS ASSOCIATED WITH DISEASES

<130> 433112000700

<140> US 10/032,106

<141> 2001-12-21

<150> US 60/258,070

<151> 2000-12-20

<160> 10

<170> FastSEQ for Windows Version 4.0

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<211> 924  
<212> DNA  
<213> Homo sapiens

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atccggcatga tgggtttaat caaggtcagt cctcagctta acaaccccat gtacttttc	180
ctcagtcact tgtcatttgc tgatgtgtgg ttttcttcca atgtcaccac taaaatgttg	240
gaaaacctgt tttcagataa aaaaacaatt acttatgctg gttgtttagt acagtgttcc	300
tttcttcatgt ctcttgcata tttttttttt ctgcgtatggc ctttgataga	360
tacatggcaa ttgggaatcc tctgctttat ggcagtaaaa tgtcaagggt tttttttttt	420
cgactgatta cttdccctta catttatggt tttctgacga gtctggcagc aacattatgg	480
acttacggct tgtacttctg tgaaaaaatt gagatcaacc atttctactg tgcagatcca	540
cctctcatca aaatggccctg tgccgggacc tttgtttttt aatataacaat gatcataactt	600
gccggcattta acttcacata ttccctgact gtaattatca tcttttactt attcatcctc	660
attgccattt tgcgaatgcg ctcagcggaa ggaaggcaga aggccttttc cacatgtggg	720
tcccatctga cagctgtcat tatattctat ggtactctga tttttttttt tttttttttt	780
cccacagagg agtctgttggc gcagggggaaatgggttgc tttttttttt tttttttttt	840
cccatgttga atcccatgtat ctacagtctg aggaacaagg atgtgaaaaaa ggccatgtatg	900
aaagtatca gcagatcatg ttat	924

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<213> Homo sapiens

<400> 2

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ggaaacaaaa ccattttttt attatctcac ttggacccac atcttcacac ttctatgtat	180
ttttttttttt ccaacccatggat cttttttttt cttttttttt cttttttttt cttttttttt	240
ctcctggta atctcaggggg agcagacaaa tcaatctcctt atgggtttttt tttttttttt	300

ctgtacatct	ctctaggc	ttt	ggatctaca	aatgcgttc	tcttagg	atgttattt	360
gaccgctatg	cagctgtt	g	caggccc	c	actacacag	tagtcatgc	420
tatgtgctga	tggcttctac	t	tc	atgggtt	ccaa	cttgc	480
gtgctcatct	tgcttttaac	a	ctttgtg	g	aaaataaa	at	540
gttcctccat	tgctcaagct	t	g	acactacta	ta	aatgaatc	600
tttgtcagtg	tcattattct	t	tttgc	at	aaaat	ctatattc	660
attgtcaggg	cagtc	at	gataa	g	agagaaa	gttggg	720
tgtggctccc	ac	tttcc	tttacgg	c	atctatct	tgcttac	780
cagcccg	acaactactc	t	caaggat	g	tttctctt	ctacaccatc	840
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<212> DNA  
<213> Homo sapiens

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<223> n= a, c, g, or t

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ggaac	ctgg	g	cat	gat	ca	tca	attt	ctg	act	tc	ta	act	ctc	120
tactt	tctca	g	ca	at	ct	gt	tc	act	gt	ct	ta	at	cc	180
atgct	ggtga	a	c	t	t	t	t	at	ct	c	t	at	cc	240
ctctactt	tct	t	tc	ttt	t	t	t	tc	t	t	t	tc	t	300
gaccg	ctat	t	tt	gn	ct	ct	cc	cc	cc	tt	tt	tt	tt	360
ttgn	cntct	g	cc	acc	ctt	tt	ttt	ttt	ttt	ttt	ttt	ttt	ttt	420
tgcc	tgc	t	gg	gt	gt	gt	gt	ct	ac	tg	cc	cc	cc	480
ggcc	tatgt	t	aaa	act	gt	cc	ttt	ttt	ttt	ttt	ttt	ttt	ttt	540
ctcc	ctct	g	ta	aa	at	cc	ttt	ttt	ttt	ttt	ttt	ttt	ttt	600
tccg	tgt	t	tt	ttt	ttt	ttt	ttt	ttt	ttt	ttt	ttt	ttt	ttt	660
tc	tc	tc	tc	tc	tc	tc	tc	tc	tc	tc	tc	tc	tc	720
at	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	780
cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	840
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at	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	930

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<212> DNA  
<213> Homo sapiens

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ggaat	ggat	tt	at	gt	at	tt	tt	ttt	ttt	ttt	ttt	ttt	ttt	ttt	180
ttt	cc	tt	tt	tt	tt	tt	tt	ttt	ttt	ttt	ttt	ttt	ttt	ttt	240
ttt	cc	tt	tt	tt	tt	tt	tt	ttt	ttt	ttt	ttt	ttt	ttt	ttt	300
ttt	cc	tt	tt	tt	tt	tt	tt	ttt	ttt	ttt	ttt	ttt	ttt	ttt	360
ttt	cc	tt	tt	tt	tt	tt	tt	ttt	ttt	ttt	ttt	ttt	ttt	ttt	420
ttt	cc	tt	tt	tt	tt	tt	tt	ttt	ttt	ttt	ttt	ttt	ttt	ttt	480
ttt	cc	tt	tt	tt	tt	tt	tt	ttt	ttt	ttt	ttt	ttt	ttt	ttt	540
ttt	cc	tt	tt	tt	tt	tt	tt	ttt	ttt	ttt	ttt	ttt	ttt	ttt	600
ttt	cc	tt	tt	tt	tt	tt	tt	ttt	ttt	ttt	ttt	ttt	ttt	ttt	660

gctatggcta tcataaggat tcgctcactc cagggcagggc tcaaggcctt taccacatgt	720
ggctctcacc tgaccgtggt gacaatcttc tatgggtcag ccatctccat gtatatgaaa	780
actcagtcca agtcctaccc tgaccaggac aagtttatct cagtgtttt a tggagctttg	840
acacccatgt tgaacccccc t gatatagc ctgagaaaaa aagatgttaa acgggcaata	900
aggaaagtta t gttgaaaag gacatga	927

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ctgcttggaa actgcactct cttctcattc atccaggctg atgcagccct ccatgaaccc	180
atgtacctct ttctggccat gttggcagcc atcgacctgg tcctttccctc ctcagcactg	240
cccaaaatgc ttgcatatt ctggttcagg gatcgggaga taaaacttctt tgcctgtctg	300
gcccagatgt tcttccttca ctcccttctcc atcatggagt cagcagtgc gctggccatg	360
gccttggacc gctatgtggc tatctgcaag ccactgcact acaccaaggc cctgactggg	420
tccctcatca ccaagattgg catggctgtc gtggcccccctt gctgacact aatgactcca	480
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ggcatcgctg tggccatgtt tattgtgggt ttggacactgc tccttgttat cctgtcttat	660
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gggacatgtg tctctcatat aggtgccatc tttagccttctt acacaactgt ggtcatctct	780
tcagtcatgc accgtgttagc ccggccatgtgc gcccctcatg tccacatctt ccttgccat	840
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 <212> PRT  
 <213> Homo sapiens

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20 25 30	
Tyr Ile Ile Thr Met Val Gly Asn Ile Gly Met Met Val Leu Ile Lys	
35 40 45	
Val Ser Pro Gln Leu Asn Asn Pro Met Tyr Phe Phe Leu Ser His Leu	
50 55 60	
Ser Phe Val Asp Val Trp Phe Ser Ser Asn Val Thr Pro Lys Met Leu	
65 70 75 80	
Glu Asn Leu Phe Ser Asp Lys Lys Thr Ile Thr Tyr Ala Gly Cys Leu	
85 90 95	
Val Gln Cys Phe Phe Ile Ala Leu Val His Val Glu Ile Phe Ile	
100 105 110	
Leu Ala Ala Met Ala Phe Asp Arg Tyr Met Ala Ile Gly Asn Pro Leu	
115 120 125	
Leu Tyr Gly Ser Lys Met Ser Arg Val Val Cys Ile Arg Leu Ile Thr	
130 135 140	
Phe Pro Tyr Ile Tyr Gly Phe Leu Thr Ser Leu Ala Ala Thr Leu Trp	
145 150 155 160	
Thr Tyr Gly Leu Tyr Phe Cys Gly Lys Ile Glu Ile Asn His Phe Tyr	
165 170 175	

Cys Ala Asp Pro Pro Leu Ile Lys Met Ala Cys Ala Gly Thr Phe Val  
       180                  185                  190  
 Lys Glu Tyr Thr Met Ile Ile Leu Ala Gly Ile Asn Phe Thr Tyr Ser  
       195                  200                  205  
 Leu Thr Val Ile Ile Ile Ser Tyr Leu Phe Ile Leu Ile Ala Ile Leu  
       210                  215                  220  
 Arg Met Arg Ser Ala Glu Gly Arg Gln Lys Ala Phe Ser Thr Cys Gly  
       225                  230                  235                  240  
 Ser His Leu Thr Ala Val Ile Ile Phe Tyr Gly Thr Leu Ile Phe Met  
       245                  250                  255  
 Tyr Leu Arg Arg Pro Thr Glu Glu Ser Val Glu Gln Gly Lys Met Val  
       260                  265                  270  
 Ala Val Phe Tyr Thr Thr Val Ile Pro Met Leu Asn Pro Met Ile Tyr  
       275                  280                  285  
 Ser Leu Arg Asn Lys Asp Val Lys Lys Ala Met Met Lys Val Ile Ser  
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 Arg Ser Cys  
       305

<210> 7  
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 <213> Homo sapiens

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       20                  25                  30  
 Ile Phe Tyr Ile Phe Thr Leu Leu Gly Asn Lys Thr Ile Ile Val Leu  
       35                  40                  45  
 Ser His Leu Asp Pro His Leu His Thr Pro Met Tyr Phe Phe Ser  
       50                  55                  60  
 Asn Leu Ser Phe Leu Asp Leu Cys Tyr Thr Thr Gly Ile Val Pro Gln  
       65                  70                  75                  80  
 Leu Leu Val Asn Leu Arg Gly Ala Asp Lys Ser Ile Ser Tyr Gly Gly  
       85                  90                  95  
 Cys Val Val Gln Leu Tyr Ile Ser Leu Gly Leu Gly Ser Thr Glu Cys  
       100                 105                 110  
 Val Leu Leu Gly Val Met Val Phe Asp Arg Tyr Ala Ala Val Cys Arg  
       115                 120                 125  
 Pro Leu His Tyr Thr Val Val Met His Pro Cys Leu Tyr Val Leu Met  
       130                 135                 140  
 Ala Ser Thr Ser Trp Val Ile Gly Phe Ala Asn Ser Leu Leu Gln Thr  
       145                 150                 155                 160  
 Val Leu Ile Leu Leu Leu Thr Leu Cys Gly Arg Asn Lys Leu Glu His  
       165                 170                 175  
 Phe Leu Cys Glu Val Pro Pro Leu Leu Lys Leu Ala Cys Val Asp Thr  
       180                 185                 190  
 Thr Met Asn Glu Ser Glu Leu Phe Phe Val Ser Val Ile Ile Leu Leu  
       195                 200                 205  
 Val Pro Val Ala Leu Ile Ile Phe Ser Tyr Ser Gln Ile Val Arg Ala  
       210                 215                 220  
 Val Met Arg Ile Lys Leu Ala Thr Gly Gln Arg Lys Val Phe Gly Thr  
       225                 230                 235                 240  
 Cys Gly Ser His Leu Thr Val Val Ser Leu Phe Tyr Gly Thr Ala Ile  
       245                 250                 255

Tyr Ala Tyr Leu Gln Pro Gly Asn Asn Tyr Ser Gln Asp Gln Gly Lys  
260 265 270  
Phe Ile Ser Leu Phe Tyr Thr Ile Ile Thr Pro Met Ile Asn Pro Leu  
275 280 285  
Ile Tyr Thr Leu Arg Asn Lys Asp Val Lys Gly Ala Leu Lys Lys Val  
290 295 300  
Leu Trp Lys Asn Tyr Asp Ser Arg  
305 310

<210> 8  
<211> 309  
<212> PRT  
<213> Homo sapiens

<220>  
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<223> Xaa= any amino acid

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Gly Ile Tyr Leu Val Thr Ile Val Gly Asn Leu Gly Met Ile Thr Leu  
35 40 45  
Ile Cys Leu Asn Ser Gln Leu His Thr Pro Met Tyr Tyr Phe Leu Ser  
50 55 60  
Asn Leu Ser Leu Met Asp Leu Cys Tyr Ser Ser Val Ile Thr Pro Lys  
65 70 75 80  
Met Leu Val Asn Phe Val Ser Glu Lys Asn Ile Ile Ser Tyr Ala Gly  
85 90 95  
Cys Met Ser Gln Leu Tyr Phe Leu Val Phe Val Ile Ala Glu Cys  
100 105 110  
Tyr Met Leu Thr Val Met Ala Tyr Asp Arg Tyr Val Xaa Xaa Cys His  
115 120 125  
Pro Leu Leu Tyr Asn Ile Ile Met Ser His His Thr Cys Leu Leu Leu  
130 135 140  
Val Ala Val Val Tyr Ala Ile Gly Leu Ile Gly Ser Thr Ile Glu Thr  
145 150 155 160  
Gly Leu Met Leu Lys Leu Pro Tyr Cys Glu His Leu Ile Ser His Tyr  
165 170 175  
Phe Cys Asp Ile Leu Pro Leu Met Lys Leu Ser Cys Ser Ser Thr Tyr  
180 185 190  
Asp Val Glu Met Thr Val Phe Phe Ser Ala Gly Phe Asn Ile Ile Val  
195 200 205  
Thr Ser Leu Thr Val Leu Val Ser Tyr Thr Phe Ile Leu Ser Ser Ile  
210 215 220  
Leu Gly Ile Ser Thr Thr Glu Gly Arg Ser Lys Ala Phe Ser Thr Cys  
225 230 235 240  
Ser Ser His Leu Ala Ala Val Gly Met Phe Tyr Gly Ser Thr Ala Phe  
245 250 255  
Met Tyr Leu Lys Pro Ser Thr Ile Ser Ser Leu Thr Gln Glu Asn Val  
260 265 270  
Ala Ser Val Phe Tyr Thr Thr Val Ile Pro Met Leu Asn Pro Leu Ile  
275 280 285  
Tyr Ser Leu Arg Asn Lys Glu Val Lys Ala Ala Val Gln Lys Thr Leu

290  
Arg Gly Lys Leu Phe  
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<210> 9  
<211> 308  
<212> PRT  
<213> Homo sapiens

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20 25 30  
Ile Ile Tyr Leu Ser Thr Leu Leu Gly Asn Gly Phe Met Ile Phe Leu  
35 40 45  
Ile His Phe Asp Pro Asn Leu His Thr Pro Ile Tyr Phe Phe Leu Ser  
50 55 60  
Asn Leu Ser Phe Leu Asp Leu Cys Tyr Gly Thr Ala Ser Met Pro Gln  
65 70 75 80  
Ala Leu Val His Cys Phe Ser Thr His Pro Tyr Leu Ser Tyr Pro Arg  
85 90 95  
Cys Leu Ala Gln Thr Ser Val Ser Leu Ala Leu Ala Thr Ala Glu Cys  
100 105 110  
Leu Leu Leu Ala Ala Met Ala Tyr Asp Arg Val Val Ala Ile Ser Asn  
115 120 125  
Pro Leu Arg Tyr Ser Val Val Met Asn Gly Pro Val Cys Val Cys Leu  
130 135 140  
Val Ala Thr Ser Trp Gly Thr Ser Leu Val Leu Thr Ala Met Leu Ile  
145 150 155 160  
Leu Ser Leu Arg Leu His Phe Cys Gly Ala Asn Val Ile Asn His Phe  
165 170 175  
Ala Cys Glu Ile Leu Ser Leu Ile Lys Leu Thr Cys Ser Asp Thr Ser  
180 185 190  
Leu Asn Glu Phe Met Ile Leu Ile Thr Ser Ile Phe Thr Leu Leu Leu  
195 200 205  
Pro Phe Gly Phe Val Leu Leu Ser Tyr Ile Arg Ile Ala Met Ala Ile  
210 215 220  
Ile Arg Ile Arg Ser Leu Gln Gly Arg Leu Lys Ala Phe Thr Thr Cys  
225 230 235 240  
Gly Ser His Leu Thr Val Val Thr Ile Phe Tyr Gly Ser Ala Ile Ser  
245 250 255  
Met Tyr Met Lys Thr Gln Ser Lys Ser Tyr Pro Asp Gln Asp Lys Phe  
260 265 270  
Ile Ser Val Phe Tyr Gly Ala Leu Thr Pro Met Leu Asn Pro Leu Ile  
275 280 285  
Tyr Ser Leu Arg Lys Lys Asp Val Lys Arg Ala Ile Arg Lys Val Met  
290 295 300  
Leu Lys Arg Thr  
305

<210> 10  
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<212> PRT  
<213> Homo sapiens

<400> 10

Met Ser Ala Ser Asn Ile Thr Leu Thr His Pro Thr Ala Phe Leu Leu  
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Val Gly Ile Pro Gly Leu Glu His Leu His Ile Trp Ile Ser Ile Pro  
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Phe Cys Leu Ala Tyr Thr Leu Ala Leu Leu Gly Asn Cys Thr Leu Leu  
35 40 45  
Leu Ile Ile Gln Ala Asp Ala Ala Leu His Glu Pro Met Tyr Leu Phe  
50 55 60  
Leu Ala Met Leu Ala Ala Ile Asp Leu Val Leu Ser Ser Ser Ala Leu  
65 70 75 80  
Pro Lys Met Leu Ala Ile Phe Trp Phe Arg Asp Arg Glu Ile Asn Phe  
85 90 95  
Phe Ala Cys Leu Ala Gln Met Phe Phe Leu His Ser Phe Ser Ile Met  
100 105 110  
Glu Ser Ala Val Leu Leu Ala Met Ala Phe Asp Arg Tyr Val Ala Ile  
115 120 125  
Cys Lys Pro Leu His Tyr Thr Lys Val Leu Thr Gly Ser Leu Ile Thr  
130 135 140  
Lys Ile Gly Met Ala Ala Val Ala Arg Ala Val Thr Leu Met Thr Pro  
145 150 155 160  
Leu Pro Phe Leu Leu Arg Cys Phe His Tyr Cys Arg Gly Pro Val Ile  
165 170 175  
Ala His Cys Tyr Cys Glu His Met Ala Val Val Arg Leu Ala Cys Gly  
180 185 190  
Asp Thr Ser Phe Asn Asn Ile Tyr Gly Ile Ala Val Ala Met Phe Ile  
195 200 205  
Val Val Leu Asp Leu Leu Val Ile Leu Ser Tyr Ile Phe Ile Leu  
210 215 220  
Gln Ala Val Leu Leu Ala Ser Gln Glu Ala Arg Tyr Lys Ala Phe  
225 230 235 240  
Gly Thr Cys Val Ser His Ile Gly Ala Ile Leu Ala Phe Tyr Thr Thr  
245 250 255  
Val Val Ile Ser Ser Val Met His Arg Val Ala Arg His Ala Ala Pro  
260 265 270  
His Val His Ile Leu Leu Ala Asn Phe Tyr Leu Leu Phe Pro Pro Met  
275 280 285  
Val Asn Pro Ile Ile Tyr Gly Val Lys Thr Lys Gln Ile Arg Glu Ser  
290 295 300  
Ile Leu Gly Val Phe Pro Arg Lys Asp Met  
305 310